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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,493	09/15/2003	Yuuichirou Tsuruta	0505-1245P	9236
2292 7590 03/09/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER EDWARDS, LOREN C	
			ART UNIT	PAPER NUMBER
			3748	
SHORTENED STATUTORY PERIOD OF RESPONSE		NOTIFICATION DATE	DELIVERY MODE	
3 MONTHS		03/09/2007	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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mailroom@bskb.com

Office Action Summary

Application No.

10/661,493

Applicant(s)

TSURUTA, YUUICHIROU

Examiner

Loren C. Edwards

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 2/13/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7,9-14,17,19 and 20 is/are rejected.
- 7) ☒ Claim(s) 8 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2/13/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. An Applicant's Amendment filed on 2/13/07 has been entered. Claim 2 has been canceled and claims 1, 5, 8, 11, 15, 16, and 18 have been amended. Overall, claims 1, and 3-20 are pending in the application.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 2/13/07 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the information disclosure statement.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 7, 9, 10, 11, 12, 17, 19, and 20 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hoeptner, III (U.S. 4,955,193). Hoeptner discloses a heat shield for a vehicle having an exhaust system member extending from an exhaust port of an internal combustion engine, the heat shield comprising: a first heat shield plate for surrounding a curved section of the exhaust system member (Fig. 2, No. 13; Fig. 1, No. 10b), the curved section being provided in the vicinity of the exhaust port; a second heat shield plate for covering above a straight section of the exhaust system member (Fig. 2, No. 13; Fig. 1, No. 10a), the straight section connecting to the curved section (Figs. 4a

and 4b); and a band member for supporting the first heat shield plate on the exhaust system member (Fig. 3, No. 26), wherein a small diameter section is provided on an end section of the first heat shield plate (Fig. 4a), and an end section of the second heat shield plate overlaps the small diameter section along a length of the exhaust system member, with a gap (Fig. 4b, I1 and I2) being provided in a radial direction between the small diameter section of the first heat shield plate and the end section of the second heat shield plate.

5. With regards to claim 7, Hoeptner discloses the heat shield for an internal combustion engine exhaust system of claim 1, as described above, and further wherein an end of the first heat shield plate adjacent to the exhaust port of the engine includes projection sections (Fig. 6a; No. 15), and the band member presses the projection section against the exhaust system member to attach the first heat shield plate to the exhaust system member (Fig. 3).

6. With regards to claim 9, Hoeptner discloses the heat shield for an internal combustion engine exhaust system of claim 2, as described above, and further wherein the small diameter section of the first heat shield plate includes projections fitting into sections of the exhaust system member (Fig. 6a).

7. With regards to claim 10, Hoeptner discloses the heat shield for an internal combustion engine exhaust system of claim 1, as described above, and further wherein an intermediate portion of the first heat shield plate has a diameter larger than a diameter of an exhaust system member, and the band member wraps around the intermediate portion of the first heat shield plate (Figs. 4a and 4b).

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8. With regards to claim 11, Hoeptner discloses a heat shield for an exhaust system member extending from an exhaust port of an internal combustion engine, comprising: a first heat shield plate for surrounding substantially all of a curved section of the exhaust system member (Fig. 2, No. 13; Fig. 1, No. 10b), the curved section of the exhaust system member extending from the exhaust port; a second heat shield plate mounted over a straight section of the exhaust system member (Fig. 2, No. 13; Fig. 1, No. 10a), the straight section connecting to the curved section (Figs. 4a and 4b); and a band member (Fig. 3, No. 26) for supporting the first heat shield plate on the exhaust system member, wherein the first heat shield plate is formed as a single plate (Fig. 3, No. 11) extending along at least half way along the curved section of the exhaust system member.

9. With regards to claim 12, Hoeptner discloses the heat shield of claim 11, as described above, and further wherein a small diameter section is provided on an end section of the first heat shield plate (Fig. 4a), and an end section of the second heat shield plate overlaps the small diameter section along a length of the exhaust system member, with a gap (Fig. 4b, I1 and I2) in a radial direction being provided between the small diameter section of the first heat shield plate and the end section of the second heat shield plate.

10. With regards to claim 17, Hoeptner discloses the heat shield of claim 11, as described above, and further wherein an end of the first heat shield plate adjacent to the exhaust port of the engine includes projection sections (Fig. 6a; No. 15), and the band

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member presses the projection sections against the exhaust system member to attach the first heat shield plate to the exhaust system member (Fig. 3).

11. With regards to claim 19, Hoeptner discloses the heat shield of claim 12, as described above, and further wherein the small diameter section of the first heat shield plate includes projections fitting into sections of the exhaust system member (Fig. 6a).

12. With regards to claim 20, Hoeptner discloses the heat shield of claim 11, as described above, and further wherein an intermediate portion of the first heat shield plate has a diameter larger than a diameter of an exhaust system member, and the band member wraps around the intermediate portion of the first heat shield plate (Figs. 4a and 4b).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claims 3, 4, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoeptner in view of design choice. Hoeptner discloses the heat shield of claims 1 and 11, as described above, but fails to specifically describe wherein the exhaust system member is a U-shaped exhaust pipe which extends forwardly from the exhaust port of the engine, curves rearward, and extends in a substantially straight manner along one side of the engine to a position where the U-shaped exhaust pipe joins a middle pipe, or wherein the U-shaped pipe is formed as a one-part pipe. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to use a one-part U-shaped exhaust pipe because Applicant has not disclosed that the shape of the exhaust pipe provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Hoeptner's exhaust pipe and applicant's invention, to perform equally well with the shape described in Figure 1 of Hoeptner or claims 3, 4, 13, and 14 because both shapes would perform the same function of routing exhaust gases from an engine considering their intended use. Therefore, it would have been prima facie obvious to modify Hoeptner to obtain the invention as specified in claims 3, 4, 13, and 14 because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Hoeptner.

16. Claims 5, 6, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoeptner in view of Wolf et al. (U.S. 5,816,043). Hoeptner discloses the heat shield of claim 1, as described above, but fails to specifically describe wherein

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the first heat shield plate includes an upper plate and a lower plate which mate together to surround an entire outer circumference of the curved section of the exhaust system member. Wolf discloses a heat shield for an internal combustion engine application that teaches to mate an upper and lower plate together to completely surround the outer circumference of a curved section of an exhaust member (Wolf; Figs. 1, 2, 4A and 4B). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the complete covering of the exhaust member as taught by Wolf in the shield of Hoeptner for the advantage of shielding all parts of the hot surface to minimize heat build up in the engine (Wolf; Col. 1, Lines 24-28).

17. With regards to claim 6, the modified Hoeptner discloses the heat shield of claim 5, as described above, and further wherein the upper plate and the lower plate are joined by a band member (Wolf; Fig. 2, No. 48).

18. With regards to claim 15, Hoeptner discloses the heat shield of claim 11, as described above, but fails to specifically describe wherein the first heat shield plate includes an upper plate and a lower plate (Wolf; Figs. 1, 2, 4A and 4B) each having flanges on inner and outer edges thereof (Wolf; Claim 1), the flanges of the upper plate mating with the flanges of the lower plate, so that the upper plate and the lower plate surround the exhaust member. Wolf discloses a heat shield for an internal combustion engine application that teaches a heat shield plate with an upper plate and a lower plate, each having flanges on inner and outer edges thereof, the flanges of the upper plate mating with the flanges of the lower plate, so that the upper plate and the lower plate surround the exhaust system member. It would have been obvious to one having

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ordinary skill in the art at the time the invention was made to utilize the complete covering of the exhaust member and joining technique for the covering as taught by Wolf in the shield of Hoeptner for the advantage of shielding all parts of the hot surface to minimize heat build up in the engine (Wolf; Col. 1, Lines 24-28).

19. With regards to claim 16, the modified Hoeptner discloses the heat shield of claim 15, as described above, and further wherein the upper plate and the lower plate are joined by the band member (Wolf; Fig. 2, No. 48) and surround an entire outer circumference of the curved section of the exhaust system member (Wolf; Fig. 2).

Response to Arguments

20. Applicant's arguments filed 2/13/07, with regards to claims 1, 3, 4, 7, 9, 10, 11-14, 17, 19, and 20 have been fully considered but they are not persuasive.

21. Re claim 1, Applicant has argued that Hoeptner fails to disclose wherein a gap is formed between intersecting ends of the heat shield. The examiner respectfully disagrees. Figure 4b of Hoeptner clearly illustrates a gap being formed between pieces 22 and 23 and this gap is more clear when comparing Figure 4B with 4A.

22. Re claim 11, Applicant has argued that Hoeptner fails to disclose wherein the first heat shield plate is formed as a single plate extending along at least half way along the curved section of the exhaust system member. The examiner respectfully disagrees. Figure 3 of Hoeptner discloses the single plate section of an individual section of the Hoeptner invention. The single plate section covers half of the exhaust pipe.

23. Applicant's arguments with respect to claims 5, 6, 15, and 16 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

24. Claims 8 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

25. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Loren C. Edwards whose telephone number is (571) 272-2756. The examiner can normally be reached on M-TH 5:30-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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